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ABSTRACT

A study of professional development intervention programs in which schools choose their own issues and action plans is presented in this report. "Intervention" refers to university introduction of new professional development models into the school. A 3-year program involving five schools in collaboration with university staff members and leadership teams was evaluated by site visitations, interviews with 111 teachers and 4 administrators, and field notes of all interactions. Findings identified the following characteristics of supportive intervention: active involvement; acknowledgement of the affective dimension; recognition of the interdependent university/school relationship; and adaptation to the individual school culture. An outcome was the achievement of short-term rather than long-term goals caused by the failure to maintain leadership team roles in absence of university support. A final recommendation calls for caution in dealing with the adversarial relationship that often exists between teachers and administrators. One figure and three tables are included. (18 references) (LMI)

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A Revisionist View of Intervention

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A Revisionist View of Intervention

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This study explores the nature of intervention at five schools that wished to improve their already positive professional cultures for teachers, administrators, and students. Researchers at the University of Houston were interested in helping schools create time for reflection and in identifying and documenting a process of professional development in schools where students are learning and teachers are competent and effective. Within this parameter of the establishment of collaborative leadership teams, schools could choose their own issues and action plans. This view of intervention is very different from more traditional views and definitions of intervention in which new methods or curriculum models are tested in schools or teams of interventionists enter a school to identify or repair problems. It is also different from change efforts which originate from central administrators as districtwide mandates. The study of intervention occurred within the framework of a three year collaborative action research project involving a team of university staff members and leadership teams at five volunteer schools. The purpose was to examine the interventionist nature of the university presence over the three year period of the project. In this paper, we will examine the intervention process and discuss how our view of intervention came to be molded, in part, by the actions and reactions of the schools to our presence.

Orientations to Intervention

Intervention is a term that has had various meanings over the last decades, but primarily it has been used in an instrumentalist sense to denote

the actions of an outside agency, or change agent, on a school, often in attempts to introduce new procedures or curriculum models into the school (Berman & McLaughlin, 1978; Griffin, Lieberman, & Noto, 1983; Sussman, 1979). Such attempts to intervene in public school affairs often carry a serious evaluation component as researchers attempt to "prove" one curriculum, instructional method, or organizational design superior over another. Traditional approaches to intervention also imply a need to intervene because something is not working right in a school or because test scores show students are not learning.

More recent attempts to intervene in schools have been concerned with the professional culture (Lieberman, 1989) and have involved collaborative approaches to solving problems identified by the schools (Campbell, 1988; Oja & Smullyan, 1989). Evidence continues to build concerning the importance of lessening the "cult of individualism" (Hargreaves, 1980) and autonomy that has characterized teaching since its beginning. Recent discussions are moving schools toward the creation of a professional culture where teachers work together to improve learning conditions for their students (Hargreaves, 1982; Lieberman, 1989; Little, 1982; & Rosenholtz, 1989).

Despite the more current projects that attempt to account for the existing school culture, tensions persist between universities and schools as universities continue in traditional offerings and increasingly lose touch with the needs and demands of practitioners. Such tensions also make traditional views of intervention unworkable in some schools. School practitioners have developed a strong distrust of interventions by university personnel - they suspect they are being used either as guinea pigs or as work horses for someone's research project. An alternative view of intervention is offered here, based on an action science approach (Argyris, Putnam, & Smith,

1985) in which university facilitators emphasize a working relationship with the schools based in collaborative decision making and action. This approach suggests that intervention can do more than just solve immediate problems. The purpose of this process is to help school leaders cultivate reflective approaches to problem solving by encouraging them to examine underlying assumptions and values which make up the very essence of school culture (Schein, 1985). The ultimate goal of such efforts is to enhance awareness and support of a professional culture in schools where teachers and administrators continue to learn along with students.

Theoretical Framework

This project was based on the assumption that the project participants represent essentially healthy schools where students are learning. Action science is a proper and appropriate means to provide assistance to them since, by definition, the use of action science requires an understanding of the existing culture. Work within that existing culture defines the ways participants set goals and take actions to solve the problems they identify (Sarason, 1982). The interventions in this project were framed by the assumptions of action science (Argyris, Putnam & Smith, 1985) which evolved from earlier theories of intervention (Argyris, 1970) and organizational learning (Argyris & Schon, 1978). Organizations such as schools present formidable examples of strong cultures which often vary significantly from building to building. Within these organizations, there exist at least three levels of culture (Schein, 1985). The first level consists of what Schein (1985) calls "artifacts and creations". These are readily observable behaviors and symbols that are obvious to even the casual visitor though they are sometimes not decipherable. The second level of culture is "values" which are shared perceptions and beliefs which are testable in the physical

environment, but only by social consensus of the participants. These shared values are called "espoused theories of action" by Argyris & Schon (1978). The third level of culture is called "basic assumptions". These are difficult to examine and change since they are unconscious and taken for granted by the organization's participants. Schein (1985) compares his "basic assumptions" to what Argyris & Schon (1978) call "theories-in-use". They are implicit assumptions that guide behavior, and according to Argyris and Schon (1978), they cannot be exposed as mistaken unless an alternative theory can be envisioned and acted upon. An outside agent's role in this process is to assist in exposing theories through the provision of accurate information to participants. Herein lies the difficult but important role of the interventionist.

Information about the organization's theories-in-use and espoused theories is collected by the outside agents who were, in this project, the university team members. These data may serve a dual purpose. First, data provide an additional source of information to school members about the nature of their actions and the consistency of those actions with their espoused theories of action. This is necessary since, according to Argyris & Schon (1978), "organizations tend to create learning systems that inhibit double-loop learning that calls into question their norms, objectives, and basic policies" (p. 4). When organizations use theories of action which effectively block double-loop learning, the organization's participants are unable to reflect and question the assumptions and values that characterize its culture. Patton (1990) describes a similar process of feedback of data to project participants which directly affects the program. Feedback is used to inform the program as the researcher steps back to observe how feedback induces changes as they unfold. This use of feedback and observation sets up an

iterative process of learning that can lead to the establishment of a learning culture in which participants confront and resolve conflict rather than practice conflict avoidance.

The second use of data in an action science project may be to document the action process taking place in the school if such documentation is required. While it is not required that collaborative work between schools and the university also serve the function of formal research, this is often the case because of the nature of the university's research mission. Therefore the action process data become research data which may be used by researchers and school participants in dissemination efforts.

Overview of the Project

This study of intervention takes place within a larger project, sponsored by the Danforth Foundation, to develop collaborative leadership in five volunteer schools. All five schools were participants in the university's teacher education program which was designed to foster reflective inquiry skills in students and faculty. One elementary school, the middle school and the senior high school were in an urban school district, one elementary school was in a suburban district and the third elementary school was in a near-urban district. During the spring 1988 seven schools had originally volunteered to participate, but three secondary schools dropped out of the project without successfully forming leadership teams (for more information about these schools see Veal, Clift & Holland, 1989). An urban high school joined the project in the middle of year two, bringing the final total of participants to five schools. A leadership team of 7 to 9 participants was formed in each school consisting of teachers from various grade levels or subject areas and the principal, except in one school where the Dean of Instruction was designated as the principal's representative on

the team. The University team consisted of four female full time faculty members and three female research assistants. All of the elementary school teams were composed of female teachers, but there were 7 male teachers on the two secondary school teams. A requirement for participation in the project was that school teams identify an issue within the school for which they would design and implement an action plan or plans. In return, the University agreed to provide resources, help individual teachers or school leadership teams when requested, and convene network meetings.

Procedures

Data for the larger action science project consist of field notes from three full school years including summers. These field notes document formal and informal conversations with teachers and administrators, visits of university team members to the schools, phone conversations, workshops and inservices, bi-yearly network meetings of all five schools, school leadership team meetings, and other various school meetings. A total of 111 formal interviews with teachers and 4 formal, structured interviews with administrators were also conducted over the three years of the study. Verbatim transcriptions of interviews were shared with participants for accuracy and thoroughness. At least three university team members collected data at each school. Two types of reliability checks of the data were accomplished through cross checks and member checks. Cross checks occurred in regular site analysis meetings in which university team members engaged in peer debriefings and on-going data analysis. Member checks occurred informally in the form of feedback and questioning of school practitioners, and more formally through written profiles prepared by university team members for each school at the end of years two and three. These were shared with the leadership teams of the respective schools for their confirmation and/or

disconfirmation. The school profiles represented a narrative reconstruction of data providing information about the university team members' perceptions of each school's professional culture and the nature of collaboration and shared decision making in each school.

Consistent with Halpern's audit trail process (1983), data reduction was achieved through the preparation of yearly matrices (Miles & Huberman, 1984) for each school tabulating the variety of collaborative interactions which occurred within the participating schools. These matrices were shared among university team members to ensure reliability and completeness of data. Matrix categories consisted of groups within each school who interacted with each other including novice teachers (less than 3 years experience), experienced teachers, administrators, the school leadership team, and the university team. These categories were crossed with each other and with the categories of formal meetings, central administration, parents, students. Field notes were read and coded according to interactions. Then each interaction was summarized into a one sentence statement which was entered, along with the date and initials of the researcher who collected the data, on the matrix as a data point.

Data analysis for the study of the intervention process involved secondary analysis of the matrices, profiles, and network meetings. This was first accomplished by identifying instances of intervention by university facilitators as documented in the matrices for all five schools. These interventions were then categorized inductively according to patterns and themes which characterized the nature of intervention in each school. An intervention matrix was constructed for each school, and data points from the earlier matrix were inserted in relation to the university's actions, information given to schools, and schools actions including formal meetings.

action plans, and outcomes of the action plans. A final interpretive cross-case analysis yielded patterns that held for all five schools over time.

The Nature of Supportive Intervention

Very early in the project, university team members engaged in discussions about the nature of their interventions and debated the ethics of various forms of intervention. It was acknowledged that our very presence in the schools was an intervention as was the initiation of the project itself. Once we came to terms with the interventionist nature of our presence it was easier to think of our actions in terms of intervention and we began planning those actions and carefully documenting their nature over time. However we purposely worked to conduct interventions that would support the efforts of the schools, thus our use of the term "supportive intervention" to distinguish this process model.

Our definition of intervention is consistent with that of Argyris (1970) in that it means "to enter an ongoing system of relationship, to come between or among persons, groups, or objects for the purpose of helping them" (p. 15). This definition is also consistent with Webster's (1971) interpretation of the Latin term for "to come between". In this view of intervention, the task of the interventionist is not change, but to generate valid information, help the client make informed choices, and develop commitment to those changes. The long term goal of the intervention is the ability of the organization or client to continue learning without the intervenor (Argyris, 1970).

This model of supportive intervention honors the existing school culture and has as its foundation an appreciation for what is good and healthy about schools. It is emotional work which has as its focus individuals within the school system. Finally, supportive intervention recognizes that collaborative work is reciprocal. Not only does the university have the power to affect the

school just by the very presence of university staff, but also the actions and reactions of the school participants can have a profound affect on the university's subsequent interventions. This reciprocal nature of supportive intervention means that the project has an unfolding element, and that interventionists must be open to the ambiguity and uncertainty which accompanies this type of work. Therefore supportive intervention might be metaphorically considered a feminine enterprise as it is designed to assist and empower schools for change rather than to force or coerce change.

The next sections of this paper illustrate supportive intervention by describing the university team's actions, the nature of information given to schools, and the schools' actions in response to the interventions. Finally the affective nature of the university-school relationships will be described in relation to the actions and reactions of all participants.

Project Interventions: The University Team's Actions

Table 1 enumerates the interventions that occurred during the three year period of the project in the five schools that successfully formed leadership teams and identified issues. The variations in the number of interventions in each school are illustrative of the university team members' attempts to be responsive to the special needs of each school. This is clear evidence of the emergent nature of the supportive intervention process.

Table 1. Forms of intervention

	School 1	School 2	School 3	School 4	School 5	Total
Teacher Interviews	25	31	22	25	8	111
Meetings Attended by UH	29	17	19	27	12	104
Classroom Observations	16	21	18	21	4	80
# Days visited in yrs. 2 & 3	48	57	36	50	27	218

Teacher interviews were conducted during the first year of the project to establish a baseline of information about the teacher's perceptions of the work environment in each school. During the ensuing years, formal, semi-structured interviews were conducted with both novice and experienced teachers to learn about the schools as places where they learn to teach. In three of the schools, subsequent action plans dealt with helping teachers new to the building acquire information or to assist novices in learning to teach. University team members attended a variety of meetings including those of the entire faculty, grade level teams, clusters of subject area teachers, special committees, and the project leadership team. Attendance at meetings helped university team members understand the school culture, and provided data on the collaborative leadership being facilitated at each building. Classroom observations were conducted for the same purpose, but in addition university team members focused on the question of learning to teach in a variety of

multicultural contexts, and these are reported in several other papers. Through the interviews and classroom observations, university team members were able to provide assistance to individual teachers who sought help with a variety of problems well known to those who work in schools.

In addition to all of the above, 5 network meetings were convened plus one meeting of principals, 3 consultant visits, and two profile sharing sessions were held with each of the first four schools. School 5, which joined the project in the middle of year 2, only received one profile. The first four schools also received feedback of information from the baseline interviews conducted with 41 teachers (See Veal, Clift & Holland, 1989).

From the beginning to the end of the project, time was cited as a major deterrent to the ability of school teams to function and carry out their plans. One attempt to alleviate this problem was to assign student teachers to work in all five project schools. In two of the elementary schools teachers were able to work out release time for some teachers within a grade level pod by sharing the supervision of student teachers. This intervention proved to be critical in these schools because teachers who were released for periods of time by student teachers were able to work on their teams' action plans. In one school, two teachers who were assigned student teachers conducted interviews with the teacher advisors and new teachers participating in their building's induction program. In the other school, time was used to plan and organize the district-wide induction workshops for novices and mentor teachers. In the other three schools, where classrooms were isolated structurally from each other, members of the leadership team were not able to arrange release time while student teachers were present.

The university team attempted at several points to gently push the school teams into buying time by using Danforth money to arrange for

substitute teachers. In general, this strategy was unsuccessful as only two schools actually "bought" a day to work on their project. In other instances, teachers expressed reluctance to leave their classrooms except for the infrequent network meetings convened by the university. But while the university team failed to influence teachers to buy time through substitutes, they were more successful at working with individual administrators.

In all five schools, the one-on-one interventions of university team members with administrators influenced the direction and success of the action plans. For example, in one school, the university's presence served as a buffer between the principal and teachers, and in another, the principal expressed the belief that her views of teachers as school leaders had changed because of the project. Profile sharing in another school resulted in actions and meetings called by the principal. In every school, university team members spent significant periods of time informally with the administrators who were part of their school teams.

Lest the reader assume that the schools in this project accepted every suggestion from the university, the following examples illustrate university members' unsuccessful attempts to influence school teams. For example, a graduate action research course was offered and several participants expressed interest, but no school team members enrolled. A faculty survey was carefully prepared by the university team and offered to school teams as a way to collect information from their entire school. Even though the university team strongly suggested the use of the survey and even provided time in a network meeting for schools to write their own questions to add to the survey, it was not used by any school. In addition there were numerous ideas volunteered at team meetings which might have moved the schools forward, but many were not acted upon. In some instances, the ideas involved the gathering of data about

the project, but in most instances the schools did not implement formal data collection processes.

In preparation for this paper, university team members were asked to name critical interventions at each school. Without exception, "being there" was named as an important intervention. We believe that school teams used the university's presence to gain authority they would have lacked otherwise. In at least one instance, the university gave the team a sense of protection from personal attack since team members could report that their actions were on behalf of the team and not for personal gain.

Nature of Feedback and Schools' Reactions

Following preliminary analysis of the baseline interviews a network meeting was convened in the summer to provide feedback to guide schools' revisions of their initial action plans. The university team's first attempts at feedback were somewhat primitive and awkward, and the schools' reactions were generally defensive. Nonetheless, the schools bravely persevered, wrote their first action plans, and began working on plans to implement them.

The second network meeting was an occasion for the university team to make another attempt at providing feedback, and this time, information was provided in the form of anonymous quotations from teachers and tables showing the frequency of responses to the open-ended interviews concerning the nature of the work environment in each school. In general, most school teams ignored the data and revised their action plans with little attention to the information from the university. However, while the data were disregarded, the act of receiving information from the university served to break down some of the existing barriers regarding exchange of information. The schools and the university set out with a better understanding of each other's roles in

the project, and the schools began an evolution away from "what do you want us to do" to the next stage of "what are you going to do for us?"

Feedback to the schools at the end of the second year of the project consisted of profiles which focused on the identification of espoused theories and theories-in-use at each school. Due to earlier experiences with negative feedback, university team members decided to present information in the form of confirming and disconfirming evidence for each of the espoused theories identified by the university team's data. A conscious decision was also made to present information in a manner that was descriptive and evocative rather than judgmental. The first profile sharing session with each school marked another critical point in the intervention cycle because it was a formal occasion when the schools received information from the university team. While the schools did respond to the feedback with subsequent revisions of their action plans, it is difficult to substantiate a direct cause and effect relationship between the two events.

The profile sharing sessions were considered critical points in the intervention process because, for the first time, the university team requested confirmation or disconfirmation of the data that had been collected. This was considered to be an important element of the continued participation of the schools, and was a turning point for the school leadership teams which began telling us "we want to...". By the 4th network meeting, school teams had all experienced the successful execution of their action plans, and teams evidenced even greater growth and an attitude of "we have done" toward the university team. We believe this change in the verbalization of the schools toward the university team is evidence of the movement of the leadership teams toward an ability to continue learning and growth in the absence of the university team.

Schools' Actions

In an earlier report of this project, we referred to an individual dimension of collaboration which is marked by a variety of learning needs and levels of participation in the collaborative project (Clift, Veal, Johnson & Holland, 1990). In the same way, we can readily see variations in the level of involvement of individual school teams. This variation may be influenced by the regularities of the school regarding testing and seasonal routines as well as routine operations that occur at the beginning, middle and end of the school year. Table 2 shows that formal meetings peaked in the fall semester for 4 of the schools and dropped off during the spring semester. This is indicative of the fact that action plans were implemented by the entire team during the fall semester but typically maintained by individual team members during the spring semester. Much of the progress that was made on the action plans occurred during informal, unscheduled times when teachers found time to talk. The value of these informal meetings in accomplishing schools' action plans cannot be overestimated.

Frequency of meetings was also impacted by the actual progress of each school team. When teams had specific plans which required decision or immediate tasks to be completed, meetings were held. The same rule held for the university team which gradually increased the frequency of meetings as the number of tasks to be accomplished increased.

Table 2. Frequency of Formal Leadership Team Meetings

	School 1	School 2	School 3	School 4	School 5	UH
Fall 1987	0	0	0	0	-	0
Spring 1988	0	0	0	0	-	0
Summer 1988	0	0	0	0	-	5
Fall 1988	1	0	2	5	-	4
Spring 1989	0	3	0	3	1	6
Summer 1989	0	0	0	0	0	8
Fall 1989	4	2	4	2	4	8
Spring 1990	1	2	1	1	0	8
Summer 1990	0	0	0	0	0	5

While schools had difficulty at first in deciding on issues and action plans, they all made gradual movement toward self-reliance. Their action projects represent a wide variety of needs as expressed by the leadership teams in the schools. Table 3 contains a summary of these action plans and the tangible outcomes in each school as of the end of the third year of the project.

Despite gentle pushing by the university team to move the school action plans in what we perceived were important directions, these plans and outcomes represent the schools' views of what was important. The list of outcomes is strong evidence of the commitment and work accomplished by each team.

Table 3. School action plans

	Focus of action plans	Outcomes
School 1	1. Improved communication	-Committee to handle in-building concerns and questions.
	2. Novice teachers districtwide	-Survey of novice teachers -Inservice for principals on induction -Districtwide induction program with workshops for mentors and inductees -Statewide presentation on shared decision making and induction -Handbook for novice teachers
	3. Teacher morale	-Mini-workshops for new teachers in-building -Walkabouts (short visits to classrooms) -Before school workshops
School 2	1. Teachers new to the building	-Support partners for new teachers -Brag Board -Walkabouts -New Teacher Handbook -Teacher Fair -New teacher Inservice and teacher advisors for new teachers -Meeting with Superintendent to offer help with districtwide induction
	2. Cultural Differences	-Cinco de Mayo Festival -Six Flags Over Texas Festival -School/staff luncheon
School 3	1. Schoolwide Discipline	-Discipline Committee established -Discipline Policy -Incentives for student discipline in cafeteria -Drug Awareness Committee sponsored door decorating contest and ice cream cones to promote self discipline
	2. Parental Involvement	-School Newspaper established -International Festival held to celebrate cultural diversity
School 4	1. Teacher Morale	-Workroom redecorated -Luncheons for teachers -Monthly teacher breakfasts -Christmas party -Birthday celebrations for teachers -School T-shirts sold and worn -Happygrams sent for peer recognition
	2. Student Success & Parental Involvement	-Night at the Dome for students -Sponsorship by a business -Tutoring program for students and their parents
	3. Teachers' Professional Development	-Brown Bag Forum held
School 5	1. At-risk Students	-Faculty survey to ascertain major problems -Recognize "most improved student" by monthly lunch and picture on wall -Student mentoring program for at-risk 9th graders
	2. Teacher morale	-Teacher appreciation breakfast -Monthly social gatherings and birthday celebrations -Teacher Fair -Perfect attendance recognition for teachers -Valentine Luncheon

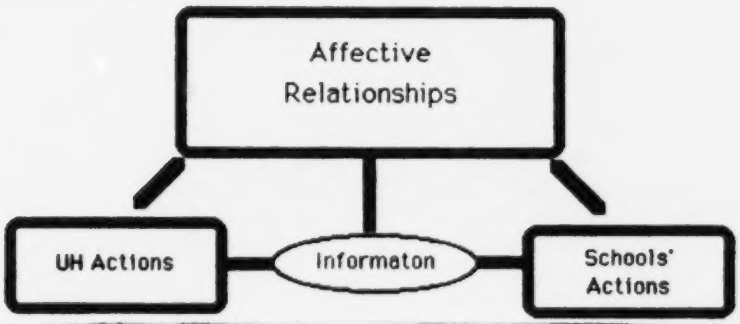
Affective Nature of Collaboration

The interventions that have been described above occurred within a collaborative project between five schools and a university team. As people attempted to learn to work together, emotional reactions to the collaborative work of school and university teams threatened at times to bring an end to the participation of individuals and even teams. While we don't often read accounts of the affective aspects of the work, we felt an obligation to present this aspect of our experiences. We suspect that the affective is often omitted from reports because of the linear nature of such reports and the difficulty of unraveling the influence of affective aspects of the project. When interventionists attempt feedback of valid information into an organization, the affective dimension is always present. This is because of an organization's natural tendency to inhibit double loop learning through suppression of information that might cause modification of the organization's underlying norms (Argyris & Schon, 1978). Unfortunately this project ended before participants developed the ability to discuss many of these sensitive areas. It should be remembered that these are our perceptions and they may be quite different from those of school participants.

There are several dimensions to the affective relationships that developed during the project. These dimensions may be understood as a continuum of positive to negative, with the positive greatly enhancing the ability of people to work together and the negative as a strong inhibiting factor. The perspectives of the researchers were influenced by this aspect of the project, and the members of school leadership teams were often affected in their relationships with each other, with other faculty members not on the team, with members of other schools' teams, and with the university team. Figure 1 illustrates that the affective nature of this intervention project is

pervasive, and its affects can be seen woven through the entire fabric of the project. The university's actions and the schools actions are both influenced by the affective nature of the relationships, and the information that is passed between the university and schools is swayed by that nature.

FIGURE 1. Affective Nature of Intervention



In this project, one of the indicators of a positive affect was the inclusion of university team members in social occasions of the school. Social occasions included both formal parties and informal, unscheduled social get-togethers. While this seldom occurred in the first two years of the project, it occurred more often the third year. Although university team members were never completely accepted into the school families, there was a definite move in that direction over the life of the project.

Negative affect resulted in some team members leaving school teams, and university team members were also influenced in the same ways at various times by this aspect of the collaboration. Our conclusion was that adults must learn to work together, and as a result of this conclusion time was devoted at network meetings to the facilitation of group process. Network meetings

became a time to celebrate small successes, and much time was devoted to discussions about what was positive in each school in an attempt to accentuate the positive affect.

When university team members first attempted to give information to several schools, the feedback was perceived as negative and judgmental. While the school teams remained with the project, it is possible that this early attempt at information-giving may have been a set-back to their progress. Feedback of data became one of the most problematic aspects of the action science project since, as we have discussed earlier, the organization's natural reaction is to suppress conflict and negative information.

Discussion

The merit of this study lies in an exploration of the strategy of supportive intervention and its appropriateness as an intervention strategy within an action research process. The discussion that follows summarizes the important characteristics of supportive intervention, and then considers the ways in which this intervention strategy impacted the overall goals of an action research project.

The most important characteristic of supportive intervention is the emphasis it gives to "being there" in the research setting. The continuous presence of the university research team members in the project schools was invariably recognized by both the university researchers and by the school-based leadership team members as an essential component of the project. The effect of time spent in the project schools was to allow university and school team members to get to know and become comfortable with each other. Spending time in the schools also allowed the university and school team members to build mutual trust and shared understanding of the unique cultures of the project schools and the ways in which their action plans were responses to

those cultures. The visibility in the schools of the university team members subtly communicated the nature of their presence as intervention, conveying the value they placed on being available to study and participate in the schools' culture, and to respond to any requests from the school leadership teams.

Another characteristic of supportive intervention is that it acknowledges the affective dimension that accompanies interventionist activities. Sometimes the operation of this affective dimension threatened the project as leadership team members experienced anxiety about new roles that conflicted with more familiar ones. The university team came to see their interventionist role including not only helping leadership teams manage operational demands placed on them as they worked to implement action plans, but also to serve as sympathetic listeners, stress counselors, and cheerleaders for the leadership teams. These are functions not conventionally associated with intervention, but in this study they were revealed to be important to the willingness of leadership team members to persist in unfamiliar roles and difficult tasks.

Supportive intervention is also characterized by its recognition of the ecology of the university/school interaction and the school to school interactions. The university team's perception of their relationship with the school leadership teams was one of interdependence, and there is evidence that this view came to be shared by the schools. One of the strongest features of the intervention was the creation of a network. This allowed schools to share ideas, and it set up a set of relationships that were mutually supportive. Team members stood to learn from each other because of their participation in the project and so did the university researchers. Acknowledging this fact meant that the interventionist activities of the university teams derived more

collaboratively from mutual consideration of events and circumstances with the leadership team. Such interdependence also required both the university team and the school leadership teams to learn how to provide each other with open access to information about the schools and their action planning and implementation.

The university team was aware from the project's beginning of the unique cultures of the individual schools, but the effect the differences among schools would have on the nature of interventions became clear only as the project continued. The university teams' commitment to supportive intervention required them to recognize the unfolding sequence of each leadership team's action plans. The university team could not make universal predictions or prescriptions for the schools, but rather had to remain grounded within the individual contexts of the schools and the experiences that occurred.

A final characteristic of supportive intervention observed in this study is one that it appears to share with more traditional forms of intervention. Despite high hopes and intentions of the university team that supportive intervention would empower the leadership teams to maintain their roles in the schools without the university presence, the teams have not sustained anything near the levels of activity they reached during the project. Moreover, an important long range goal of the project was never achieved. This goal, which was to have the leadership teams create more time and opportunities for reflection and professional development in their schools, seems--to some extent--to have fallen victim to supportive intervention. Because the university team decided to engage with the school leadership teams in ways that were responsive to their identified needs, interventions did not focus on

preparing the leadership teams for a specific professional development role in the schools.

On the other hand, it is impossible to know what intangible long term effects may accrue from supportive intervention. Each of the leadership teams expresses pride and pleasure in the accomplishment of their action plan goals, and they speak well of the experience of participating in the project. Whether or not these short term positive experiences of assuming responsibility in the future remains unclear. We on the university team are hopeful that they have.

Before schools can embrace the concept of action research, the school culture must encourage professional learning and inquiry from both teachers and administrators. Once such a professional learning culture exists, it may be possible for teachers to work together to collect information and frame issues around that information. We believe that in healthy schools, supportive intervention may provide a way to help school leaders develop a culture where teachers and administrators learn along with students. But we suggest proceeding with caution as long as the present adversarial relationship between teachers and administrators exists. For the present, interventionists must tread carefully in their attempts to change school cultures and encourage teachers add to their already full schedules.

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